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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
Implementation of Section 302 of The Telecommunications Act of 1996	)	CS Docket No. 96-46
OPEN VIDEO SYSTEMS	)	

EX PARTE COMMENTS OF FUJITSU NETWORK SWITCHING OF AMERICA, INC.

Fujitsu Network Switching of America, Inc. ("FNS"), by its undersigned counsel, submits these comments in response to the Commission's Report and Order and Notice of Proposed Rulemaking in the above captioned proceeding released March 11, 1996.[1] For the reasons discussed more fully below, FNS supports the implementation of flexible technical requirements governing OVS systems that will not only allow for, but also actively encourage the future

[1] *Implementation of Section 302 of the Telecommunications Act of 1996, Open Video Systems* and *In re Telephone Company-Cable Television Cross-Ownership Rules, Sections 63.54-63.58*, Report and Order and Notice of Proposed Rulemaking, CC Docket No. 87-266 (Terminated) and CS Docket No. 96-46, FCC 96-99 (released Mar. 11, 1996) ("Notice"). Due to the need to coordinate among FNS personnel in international locations, these comments are being submitted on an *ex parte* basis pursuant to section 1.1206(a)(1) of the Commission's rules (47 C.F.R. § 1.1206(a)(1). FNS believes that this *ex parte* filing does not prejudice any party and provides the Commission with the benefit of FNS' technical expertise and perspective on the Open Video System issues. On that basis, FNS respectfully requests that the Commission accept this *ex parte* filing. As required by the Commission's rules, two copies of the filing are being submitted under separate cover to be included in the public record.

development of innovative, efficient broadband delivery systems, including systems for multichannel video programming. To that end, FNS recommends that the Commission adopt OVS regulations that do not inadvertently inhibit the transition from analog to digital video services and the development of advanced broadband switching and transmission technologies. The nature and pace of technical developments in this area should be a matter left to the technical market.

I. FUJITSU'S INTEREST IN THIS PROCEEDING

FNS, a subsidiary of the major international telecommunications and computer manufacturing firm Fujitsu Limited, is a high technology company actively involved in the development and introduction of switched broadband and high bandwidth public and private network services. FNS is committed to the vision that broadband network technology is the key that will unlock the door to an enormous range of innovative advanced public and private network telecommunications services worldwide, particularly in the United States.

Since 1987, from its headquarters in Raleigh, North Carolina, FNS has pioneered the development of new digital high bandwidth network technologies such as its all-bandwidth central office switching system for U.S. public network applications. Such broadband technologies promise to transform existing U.S. facilities into an advanced information infrastructure that will enable the development of innovative video transmission and interface platforms. To American businesses and residential consumers, these state-of-the-art technologies mean significant economic growth, better educational and health care opportunities, and exciting entertainment options.

II. THE OVS RULES SHOULD NOT LIMIT TECHNICAL DEVELOPMENT AND INNOVATION IN BROADBAND NETWORKS

As a leader in the development of broadband technologies, FNS welcomes this opportunity to comment on the Commission's proposed Open Video Systems ("OVS") rules. While FNS strongly supports the Commission's general goal of establishing regulations that will encourage the development of new video and other services, FNS limits its comments to those proposed regulations that directly or indirectly affect the system architecture and technical requirements of OVS networks.

In particular, FNS addresses the terminology and concepts contained in the *Notice* that appear to reflect conventional cable TV and current analog television delivery systems. The current technology used for those systems will undoubtedly be obsoleted by the continuous advancement of video switching, delivery, and interface technology. If the Commission adopts regulations based on what are soon-to-be outmoded video technologies, the Commission's regulatory scheme may inhibit the gradual conversion to digital technologies, chill investment and retard innovation in broadband systems, and unnecessarily delay the introduction of educational, medical, entertainment and other useful broadband consumer services. Some of the Commission's suggested approaches to certain issues, such as capacity measurement, must be crafted carefully to avoid terms that would effectively discourage the development of advanced broadband technologies.

FNS believes that Congress took the right approach to video technology in the 1996 Telecommunications Act. Specifically, Congress did not enact provisions that dictate the technology of OVS networks. Indeed, the *Notice* describes the Commission's principal purpose

in this proceeding as implementing requirements that promote Congress' goals of "flexible market entry, enhanced competition, streamlined regulation, diversity of programming choices, investment in infrastructure and technology, and increased consumer choice."[2] With those goals in mind, FNS recommends that the Commission adopt certain modest changes to the proposed rules to ensure that consumers, OVS network providers, and manufacturers are free to develop and implement the most beneficial advanced broadband services.

III. ANALOG SERVICES SHOULD NOT BE REQUIRED

FNS is concerned that the currently proposed rules could be interpreted to mandate, or effectively mandate, that OVS providers offer analog channels. That reading would seriously inhibit advancement and innovation in broadband networks, including digital capacity for video programming. The Telecommunications Act of 1996 does not mandate that OVS providers use analog, digital or any particular technology. The statute does, however, impose must-carry and certain other obligations on OVS providers The must-carry rules do not specify that broadcast signals be transmitted as analog or digital signal; the statute merely requires that operators "shall carry . . . the signals of local commercial television stations" and that the signals of these stations "shall be carried without material degradation."[3] The Commission's Rules should permit these provisions to be satisfied by any operator that offers local broadcast channels accessible to all viewers regardless of whether the provider uses analog or digital transmissions.

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[2] Notice at ¶ 4; *see Telecommunications Act of 1996* Conference Report, S. Rep. 172, 177-178 (February 1, 1996).

[3] 47 U.S.C. § 534 (b)(1)(A) and (b)(4)(A).

The Commission also should clarify the application of its OVS rules in the context of the anticipated transition of broadcasters to digital services. Specifically, the Commission should make it clear that it will be left to the discretion of OVS operators to choose to carry both analog and the digital programming of local broadcasters once both signals become available, as some commenting parties have suggested.[4] As long as the OVS operator provides a signal containing local broadcasters' programming that is accessible to subscribers (which in the case of digital programming may entail the use of converter boxes), the provider's must-carry obligations should be deemed satisfied. Some OVS operators may choose to transmit must carry signals in digital, rather than analog, format in order to use the existing copper cable to the home. If the Commission's Rules dictate that OVS operators must deliver analog services to the homes, some operators will need to replace existing copper cable with coaxial cable in order to meet that requirement. That conversion would entail considerable expense and inconvenience to both users and providers, while offering no regulatory benefits.

IV. THE COMMISSION RULES REGARDING CAPACITY MEASUREMENT MUST ACCOMMODATE DIGITAL TECHNOLOGY

In its *Notice*, the Commission sought comment on how to measure the "capacity" of an OVS network where both analog and digital transmissions are used. It is important that the Commission's Rules not inadvertently constrain the development of innovative technology by the use of conventional analog and cable television terminology. To ensure that digital

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[4] *See, e.g., Comments of the Association of America's Public Television Stations,* at 17.

broadband services remain free to develop in response to technology advances and customer demand, rather than in response to unintended regulatory constraints, capacity for digital systems should be expressed in terms of bandwidth.[5] The term "channel," where "channel" refers to a conventional 6 MHz analog video channel, is meaningless as a measure of capacity in the digital world,[6] and the Commission's Rules should not rely on the term for the purpose of implementing requirements regarding sharing, allocation and location. (Indeed, "channel" location will become irrelevant as new video interface technologies become available.) Furthermore, if the Commission's Rules impose regulatory obligations or privileges based on the sharing, allocation or location of conventional 6 MHz analog "channels," those rules will chill the incentive to develop and implement better compression technology and innovative interface options. Innovation in compression technology and interface options serves the public interest because it leads to more efficient use of the Nation's telecommunications infrastructure and provides new alternatives to end users. Measuring capacity in terms of bandwidth will encourage compression technology.

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[5] For example, when applying the statutory limitation on capacity selected by the OVS operator or its affiliates when demand exceeds capacity, the operator would be limited to selecting the channels provided over 1/3 of the megabits contained in the system. The number of channels available over that amount of capacity would depend upon the technology used.

[6] *See Comments of U.S. West, Inc.* at 10.

V. THE REGULATIONS SHOULD BE DRAFTED IN A WAY THAT WILL ENCOURAGE THE INCREASED USE AND DEVELOPMENT OF MORE EFFICIENT BROADBAND SWITCHING SYSTEMS

The *Notice* also seeks comment on how the Commission's OVS regulations can advance Congress' goal to "encourage the deployment on a reasonable and timely bases of advanced telecommunications capability to all Americans (including, in particular, elementary and secondary schools and classrooms) by utilizing . . . regulating methods that remove barriers to infrastructure investment."[7] There is perhaps no more important overarching public interest goal in this and other Commission proceedings implementing the 1996 Act. In the context of video services, generally, and the new OVS rules, in particular, the Commission should not model its OVS regulatory scheme on conventional cable TV systems (or video-dialtone systems). Congress envisioned that OVS networks would provide a new alternative for competitive video services. To that end, the Commission's regulations should not impede the growing use of advanced broadband technologies, such as asynchronous transfer mode ("ATM") switches, in the public network. ATM switching technologies enable the public switched infrastructure to offer

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[7] *Notice* at para. 73.

individual consumers unprecedented convenience and control over video (and other) services that they receive and pay for. Accordingly, the Commission's Rules should not hinder -- and indeed should encourage -- the use of this powerful, yet cost-effective means, of bringing advanced broadband to American consumers.

Respectfully submitted,

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